

OTTO EXNER

8°. Dissolving 11.5 g. Na in 200 ml. abs. EtOH, adding 26.6 g. Me₂C:NOH, and during 15 min., 55 g. PhCH₂Cl, refluxing the mixt. 1 hr., decanng. with 300 ml. H₂O steam distg., extg. the distillate with Et₂O, and distg. the ext. in vacuo gave 45 g. (64%) Me₂C:NOCH₂Ph, b.p. 59°, d₄²⁰ 0.8411, n_D²⁰ 1.4950. From the residue after the steam distn., 5.05 g. (4%) (PhCH₂)₂NOH was isolated. PhCH₂-NOCH₂Ph (prepd. in 31% yield from H₂NOCH₂Ph and BzH) (3.2 g.) refluxed 6 hrs. with 0.75 g. LiAlH₄ in 20 ml. C₆H₆O yielded, by pptn. with HCl in Et₂O, 1.18 g. PhCH₂-NH₂·HCl (PhCH₂NH₂Bz, m. 107°), and 80% PhCH₂OH. Adding 9.1 g. PhMeC:NOH to 1.55 g. Na in 70 ml. EtOH, cooling the mixt. to 15°, treating the cryst. mixt. with 8.5 g. PhCH₂Cl during 15 min., refluxing the mixt. 6 min., removing the NaCl, evapg. the filtrate, dilg. the residue with 70 ml. petr. ether, filtering off the residual NaCl, and evapg. the soln. gave 12.5 g. crude (8.2 g. pure) PhMeC:NOCH₂Ph (III), m. 24° (from dil. EtOH at -10°). Reduction of 2.25 g. III with 0.5 g. LiAlH₄ in 25 ml. tetrahydrofuran (6 hrs.) gave 79% PhCH₂OH and PhMeCHNH₂, isolated as the oily HCl salt; PhMeCHNH₂Bz, m. 119° (from dil. EtOH).
M. Hudlická

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stereoisomeric mixt. of 1,2,3,4-(MeO₂C)₂C₄H₄(OH)₂ (III),
b.p. 162°. Treating 17.5 g. III in 50 ml. C₆H₆ with 7.3 g.
C₄H₉N and at 40° with 6.3 g. AcCl gave 13.5 g. stereoisom-
eric mixt. of 1,2,3,6-(MeO₂C)₂C₄H₄(OAc)(OH) (IV), b.p.
160-5°. Treating 13.6 g. IV in 100 ml. AcOH during 30
min. with 4.3 g. CrO₃ dissolved in 4 ml. H₂O and 20 ml.
AcOH, stirring the mixt. with cooling one hr. longer, adding
6 ml. EtOH, evap. the mixt. *in vacuo* at 45°, stirring the
residue with 100 ml. H₂O, extr. the mixt. with C₆H₆, and
dry. the ext. yielded 10.5 g. stereoisomeric mixt. of
CO₂CH(CO₂Me).CH(CO₂Me).CH(OAc).CH₂.CH₂ (V), b.p.

163-72°. Adding 10.5 g. V to 1.1 g. Na dust in 20 ml. C₆H₆,
refluxing the mixt. 4 hrs., treating with 3.5 g. MeI, and re-
fluxing 4 more hrs. gave 6.4 g. CO₂CMc(CO₂Me).CH(CO₂-
Me).CH(OAc).CH₂.CH₂ (VI), b.p. 148-53°. Shaking 4.1 g.

VI with a mixt. of 10 ml. PhCH₂SH, 1 g. anhyd. ZnCl₂, and 1
g. anhyd. Na₂SO₄ at 0°, letting stand 3 days, extr. with

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$C_{11}H_{16}$, and evapd. the solvent gave 5.5 g. crude mercaptole of VI. This (5 g.) was refluxed 5 hrs. with stirring with 15 ml. suspension of Raney Ni in 150 ml. EtOH, filtered and evapd. *in vacuo*. The residue dissolved in 10 ml. EtOH, refluxed with 20 ml. 20% KOH in EtOH 4 hrs., evapd. *in vacuo*, dissolved in 20 ml. H_2O , acidified with HCl, evapd. *in vacuo* to dryness, and extd. with Et₂O gave a glassy residue which was dissolved in 40 ml. MeOH, treated with dry HCl, evapd. and distd. to give 1.4 g. of a mixt. the chromatography of which over Al_2O_3 yielded 0.7 g. stereoisomeric mixt. of

$CH(CO_2Me).CH(OH)(CH_3).CMeCO_2Me$, *b.p.* 130° (bath temp.). 2,3-(MeO_2C) $C_4H_7NO_2$, m. 67-8°, hydrogenated in MeOH over Raney Ni at normal pressure gave 65% 2,3-(MeO_2C) $C_4H_7NH_2$ which was transformed via the diazonium salt in 70% yield to 2,3-(MeO_2C) C_4H_7OH (VII), *b.p.* 125-30°, m. 68°, (monohydrate). Anhyd. VII m. 54-5°. Sapon. of VII with KOH gave 96% diacid, m. 160° (from Et₂O-petr. ether). Hydrogenation of 21 g. VII in 100 ml. MeOH over Raney Ni at 160-80° and 120 atm. gave after

chromatography 20% $CH(CO_2Me).CH(OH)(CH_3).CHCO_2Me$ (VIII), *b.p.* 124-5°, and di-Me hexahydrophthalate. Oxidation of 5.5 g. VIII in 30 ml. AcOH with 2.3 g. CrO_3 in a mixt. of 2.5 ml. H_2O and 20 ml. AcOH at 18-20° gave after

benzenesol: 3.3 g. (61%) $CH(CO_2Me).CO.(CH_3).CHCO_2Me$, *b.p.* 106-110°. M. Hudlický

EXNER, OTTO

CZECH

Derivatives of oximes. III. Determination of the structure of acyl derivatives of oximes. Otto Exner (Czech. Akad. v. 11, Prague). *Chem. Listy* 48, 1222-23 (1954); cf. *C.A.* 49, 11671. — Acyl derivs. of oximes prepd. by acylation of Na salts of oximes and considered by some authors (Schmidt, *Ber.* 31, 3224 (1898); Grammaticakis, *C.A.* 41, 24026) as N-acyl oximes were proved to be O-acyl derivs. Their ultraviolet spectra correspond to those of O-acyl derivs., and their reduction with LiAlH_4 gives primarily the corresponding alc. and oxime, which is further reduced to the amine.

Beckmann's rearrangement was noticed during the LiAlH_4 reduction of $\text{Ph}_3\text{C:NOCOR}$. The reduction of the O-Ac oximes with amalgamated Al cannot be used for proving the structure because of subsequent acetylation of the primarily formed primary amines. $\text{Me}_3\text{C:NOH}$ (I) (5 g.) suspended in 25 ml. abs. Et_2O treated according to Schmidt during 5 min. with stirring and cooling at $12-15^\circ$ with 5.3 g. BzCl , b.p. 136° , the deposited NaCl and excess I filtered with suction, after 10 min., the crystals washed with abs. Et_2O , the filtrate evapd. *in vacuo* under N during 30 min. at 25° and the oily residue (5.15 g.) (giving a red-brown color with alc.-aq. FeCl_3) crysd. gave 4.52 g. $\text{Me}_3\text{C:NOBz}$ (II), m. 43° , and 0.35 g. of a filtrate (giving a brown-violet color with FeCl_3) which, dissolved in petr. ether and washed with 0.5N NaOH, gave, after evapn., addnl. portions of II. The ultraviolet spectrum of II was compared with that of pure II, m. 44° (chart). Treating 4.8 g. $\text{Ph}_3\text{C:NOH}$ (prepd. in 90% yield from $\text{Ph}_3\text{C:NOH}$ and Na wire in Et_2O at room temp.) in 25 ml. Et_2O with 3.4 g. BzCl during 10 min., filtering off the NaCl, and evapg. the filtrate *in vacuo* under N gave 3.51 g. $\text{Ph}_3\text{C:NOBz}$ (III), m. 101° (from EtOH). $\text{Ph}_3\text{C:NOH}$ (IIIa) (10 g.) refluxed 1 hr. with 9 g. Ac_2O in 100

(OUCI)

Other Experiments

ml. Et₂O, and the solvent distd. off at 100°/20 mm gave 11.9 g. Ph₂C:NOAc (IV), m. 73° (from cyclohexane). Al powder treated with 1% NaOH, washed with water, treated with 1% HgCl₂ soln., washed with water, EtOH, and Et₂O, suspended in 20 ml. Et₂O, a few drops of satd. HgCl₂ added, a soln. of 12 g. IV in 100 ml. Et₂O was dropped in during 5 min., the mixt. stirred 4 hrs. while 12 ml. H₂O was added, the inorg. compds. filtered off, washed with Et₂O, and the filtrate washed with 10 ml. satd. K₂CO₃ soln. and dried with K₂CO₃ gave 8.02 g. Ph₂CHNHAc (V), m. 147° (from aq. EtOH). The Et₂O filtrate from V was extd. twice with dil. HCl (1:2); the ether soln. gave 5.4 g. recovered IV and 0.15 g. IIIa, and the aq. soln. yielded 1.16 g. HCl salt of Ph₂CHNH₂ (VI); PhSO₂ deriv., m. 185°. Mixing and heating 0.92 g. VI and 1 g. Ac₂O 5 min. on the steam bath, evapd. the volatile components *in vacuo*, and crystg. the residue from aq. EtOH gave 1.02 g. V. *syn*-p-MeOC₆H₄CH₂NOAc (Va), m. 48°, (0.3 g.) was reduced with 2 g. Al in 80 ml. Et₂O in the way described, and the ether soln. washed with HCl (1:2) to remove p-MeOC₆H₄CH₂NH₂ and evapd. to dryness gave 1.68 g. p-MeOC₆H₄CH₂NHAc, m. 96° (from EtOH). In order to prove that either IV, or AcOH liberated from IV during the reaction, acts as an acetylating agent toward amines, 5 g. IV was reduced with 2 g. amalgamated Al in 80 ml. Et₂O in the presence of PhCH₂NH₂ (VII), and the inorg. compds. were extd. twice with Et₂O and twice with EtOH. The EtOH ext. gave 0.05 g. of an oil from which 0.15 g. V was isolated. The ether ext. dried with Na₂SO₄, treated with dry HCl, the pptd. HCl salts filtered off, washed with Et₂O, and the filtrate evapd. *in vacuo* yielded 2.05 g. IIIa, m. 143° (the HCl salt of IIIa does not ppt. easily from the ether soln. without inoculation). Hydrolysis of the HCl salts with 20 ml. cold H₂O and extn. of the mixt. with three 20-ml. portions of Et₂O yielded 1.53 g. PhCH₂NHAc

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the aq. soln. after the hydrolysis of the HCl salts gave by ether extn. 1.21 g. VI. VII with Ac_2O gave 87% VIII, m. 81°. Reduction of 2.85 g. IV by refluxing 1 hr. with 0.4 g. LiAlH_4 in 50 ml. Et_2O gave 2.05 g. IIIa, m. 43° (from dil. EtOH). Reduction of 3.80 g. IV with 1.3 g. LiAlH_4 in 25 ml. tetrahydrofuran (9 hrs.) gave EtOH , VI, and PhCH_2NHPh (IX). EtOH was identified as $p\text{-O}_2\text{NC}_6\text{H}_4\text{CO}_2\text{Et}$ (IXa) (43%), m. 50° (from PhMe -petr. ether). The mixt. of IX and VI (3.05 g.) treated with 3.7 g. PhSO_2Cl in 75 ml. 12% NaOH and extd. with Et_2O left undissolved 2.89 g. PhCH_2NHPh (X), m. 185° (from EtOH); the ether ext. gave 0.77 g. $\text{PhCH}_2\text{NHPhSO}_2\text{Ph}$ (XI), m. 119° (from EtOH). Refluxing 0.82 g. V with 0.25 g. LiAlH_4 in 5 ml. tetrahydrofuran and 5 ml. Am_2O 6 hrs. (inner temp. 85°) gave 0.72 g. oil which, distd. at 150°/2 mm., yielded 0.34 g. Ph_2CHNH_2 , n_D^{20} 1.5630; $1\text{-C}_6\text{H}_5(\text{Ph}_2\text{CH})\text{NCONH}_2$, m. 185° (from $\text{C}_6\text{H}_5\text{-EtOH}$). Reduction of V in pure $\text{C}_6\text{H}_5\text{O}$ gave 91% recovered V. Reducing 3 g. III, m. 101°, with 0.8 g. LiAlH_4 6 hrs. in $\text{C}_6\text{H}_5\text{O}$, treating the ether ext. with HCl in Et_2O , and sepg. the ppt., and washing it with Et_2O gave 1.92 g. of a mixt. of HCl salts of VI and IX; 0.78 g. of the mixt. with 1 g. PhSO_2Cl yielded 0.19 g. X and 0.62 g. IX (corresponding to 22 and 66% HCl salts, resp.). The filtrate after the sepn. of the HCl salts contained PhCH_2OH , isolated by evapn. at 80°/100 mm. (0.92 g.), and identified by oxidation to BzOH and as $p\text{-O}_2\text{NC}_6\text{H}_4\text{CO}_2\text{CH}_2\text{Ph}$ (IXa), m. 84° (from PhMe -hexane). Reduction of 2.9 g. Va with 1.2 g. LiAlH_4 in 40 ml. Et_2O 4 hrs. gave 40% EtOH (as IXa), and, by pptn. with HCl , 2.14 g. of the HCl salt of $p\text{-MeOC}_6\text{H}_4\text{CH}_2\text{NH}_2$ (XII), m. 242° (from EtOH); PhSO_2 deriv., m. 76° (from aq. EtOH). Refluxing 2.26 g. PhCH_2NOBz , m. 101°, 3 hrs. with 0.8 g. LiAlH_4 in 100 ml. Et_2O , and treating the org. residue (1.8 g.) with HCl in Et_2O gave 1.10 g. of the HCl salt of VII, m. 256°, identified as PhCH_2NHBz , m. 107° (from dil. EtOH). From the filtrate, 0.81 g. PhCH_2OH was isolated

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Citrus E. Knicker

as XII. Reduction of 8.1 g. p -MeOCH₂CH₂NOBz, m. 108°, with 1.9 g. LiAlH₄ in C₆H₅-Et₂O (3 hrs.) gave 2.17 g. HCl salt of XII, m. 142°, and 1.55 g. PhCH₂OH. Shaking 3.93 g. BzH₂ with 2.4 g. N₂H₄·HCl and 5 g. AcOK in 15 ml. H₂O 15 min., adding 20 ml. 10% NaOH and 6.0 g. o -ClC₆H₄COCl, shaking the mixt. 30 min., letting it stand overnight, extg. the oily product with Et₂O, and evapg. the ext. below 64° gave 4.9 g. o -ClC₆H₄CH₂N₂·CHPr (XIII), m. 65° (from 90% EtOH). Reduction of 1.3 g. XIII with 0.4 g. LiAlH₄ in 10 ml. Et₂O 3 hrs. gave, after washing the ether ext. with three 6-ml. portions of N₂H₄ and evapn., 0.62 g. residue which yielded 0.58 g. o -ClC₆H₄·CH₂OH, m. 70°; from the acidic soln. was obtained, by benzoylation, PhCH₂NHCH₂OH. M. Hudlický

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EXNER, O.

Derivatives of oximes. II. Reduction of O and N-alkyl oximes with lithium aluminum hydride. In English. P. 202

Vol. 20, no. 1, Feb. 1955
SBORNIK CHEKHOSLOVATSKIKH KHMICHESKIKH RABOT
Praha, Czechoslovakia

So: Eastern European Accession Vol. 5, No. 4, April 1956

FAUER, Otto
Syntheses in estrogens group. VI. Deriva-
tives of cyclohexanol-2,3-dicarboxylic acids. Otto Fauer
and Miroslav Protiva. *Collection Czechoslov. Chem. Commu-*
muns. 20, 757-63(1955)(in English).—See C.A. 49, 11588c.
E. J. C.

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Exner, Otto

Local anæsthetics. III. Sulfonium salts. **Miroslav Protiša, Vladislav Šimák, Vladimír Hach, and Otto Ráner** (Výzkumný ústav farm. biochem., Prague). *Chem. Listy* 49, 222-3; *Collection Czechoslov. Chem. Commun.* 20, 610-16 (1955). (In Russian); *C.A.* 49, 979e. Sulfonium analogs of hydrochlorides of basic esters of some aromatic acids were prep'd. and found to be effective as local anæsthetics. Heating 3.25 g. $p\text{-H}_3\text{N}^+\text{C}_6\text{H}_4\text{CO}_2\text{Et}$ with 16 g. $\text{MeSCl}_2\text{CH}_3$ (I) and 0.05 g. Na in a distg. app. under slightly reduced pressure 8 hrs. (during which time the volatile portions distd. off), finally at 180° , treating the residue with 50 ml. 2% AcOH , and extg. the mixt. with 20 ml. C_6H_6 gave 0 g. $p\text{-H}_3\text{N}^+\text{C}_6\text{H}_4\text{CO}_2\text{CH}_2\text{CH}_2\text{SMe}$, m. 90° (from Et₂O-petr. ether or EtOH). Refluxing 28 g. $p\text{-BuOC}_6\text{H}_4\text{COCl}$ (II) with 12.5 g. 1 in 50 ml. C_6H_6 , 2.5 hrs. and distg. the mixt. gave 29.2 g. $p\text{-BuOC}_6\text{H}_4\text{CO}_2\text{CH}_2\text{CH}_2\text{SMe}$, b_p 148-55°, n_D^{20} 1.64-6; methiodide, m. $93\text{--}4^\circ$ (from MeCOEtOH). Mixing 21.5 g. $p\text{-MeC}_6\text{H}_4\text{CH}_2\text{CHCOCl}$ (II) in 60 ml. C_6H_6 with 10.2 g. 1, refluxing the mixt., after the spontaneous boiling, 1.5 hrs. and distg. the mixt. in vacuo yielded 19.7 g. $p\text{-MeOC}_6\text{H}_4\text{CH}_2\text{CH}_2\text{CHCO}_2\text{CH}_2\text{CH}_2\text{SMe}$, b_p 195-8°, n_D^{20} 1.70-1; methiodide, m. $125\text{--}6^\circ$ (from EtOH). Adding 10.1 g. $\text{MeSCH}_2\text{CH}_2\text{SH}$ in 150 ml. C_6H_6 to NaOEt prep'd. from 3.4 g. Na in 75 ml. EtOH, distg. off the mixt. of EtOH and C_6H_6 with continuous feeding of C_6H_6 so that all EtOH was removed (after 3 hrs.), concg. the soln. to 75 ml., treating the residue with 29 g. II in 75 ml. C_6H_6 , refluxing 2 hrs., dilg. the soln. with 75 ml. H_2O , washing the C_6H_6 layer twice with 75 ml. H_2O , and distg. gave 19.5 g. $p\text{-MeOC}_6\text{H}_4\text{CH}_2\text{CHCO}_2\text{CH}_2\text{CH}_2\text{SMe}$ (IIa), b_p 182-90°, m. $45\text{--}6^\circ$; 2Hc.Mel, $\text{C}_{20}\text{H}_{24}\text{O}_4\text{S}$, m. 108° (from EtOH). Refluxing a mixt.

of 15 g. Me₃SiNa in 100 ml. EtOH with a soln. of 30 g. 2,4-Me₂C₆H₃NHCOCH₂Cl in 200 ml. EtOH 2.5 hrs., filtering off the NaCl, evap. the filtrate, shaking the residue with 150 ml. Et₂O and 150 ml. H₂O, and evap. the ether soln. in vacuo gave 20.0 g. 1,4-Me₂C₆H₃NHCOCH₂SiMe₃, m. 147-8° (from petr. ether); methoxide, m. 102-3° (from EtOEt-MeCO). Refluxing 3 g. Me₃SiNa in 20 ml. EtOH with 0.5 g. *N*-(chloroacetyl)-2-methyl-5,6,7,8-tetrahydro-1-naphthylamine in 100 ml. EtOH 2.5 hrs., removing the NaCl, and shaking the evapd. filtrate with 100 ml. C₆H₆ and 100 ml. H₂O gave, after chroma.ography of the benzene layer, 4 g. *N*-(methoxymercaptoacetyl)-2-methyl-5,6,7,8-tetrahydro-1-naphthylamine, m. 146-7°. Satg. at -10° 500 ml. EtOH with NH₃, adding 50 g. MeSCH₂CH₂Cl, keeping the mixt. 6 days in the icebox, distg. off the EtOH, decomp. the residue with a soln. of 40 g. NaOH in 100 ml. H₂O, extg. with Et₂O, evap. the Et₂O, dissolving the residue in 149 ml. HCl (1:6), extg. the insol. parts with C₆H₆, alkalinizing the soln. with 40 g. NaOH in 80 ml. H₂O, and extg. with ether gave 10% MeSCH₂CH₂NH₂ (III), b. 140-50°. Treating a soln. of 2 g. III in 25 ml. C₆H₆ with 7.8 g. 2-chloroacetic acid in 25 ml. C₆H₆, shaking the mixt. with a soln. of Na₂CO₃, extg. the alk. layer with Et₂O, and working up the combined exts. yielded 4 g. 2-chloroacetic-8-methoxymercaptoethylamide (IV), m. 146-7°. Adding 3.6 g. IV to a soln. prepd. from 0.2 g. Na and 35 ml. BuOH, heating the mixt. after 2 hrs. to 80° (4 hrs.) and refluxing it finally 3 hrs., shaking the cooled mixt. with H₂O, extg. the aq. layer with Et₂O, and evap. the combined org. layers gave 2 g. 2-butylacetic-8-methoxymercaptoethylamide, m. 107-8° (from EtOH-H₂O 1:3); methoxide, m. 108-10° (from EtOEt-H₂O) (probably a mono-

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Identification of ~~subject~~ (III) Determination of the
~~subject's~~ ~~relations~~ of ~~subject~~ ~~to~~ ~~himself~~

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Abs Jour: Ref Zhur - Khimiya, No. 8, 1957, 26840.

was boiled 2.5 hours, the filtrate was mixed with 150 ml of water and V was separated by distilling the ether layer, yield 65%, melting point 147-148° (from petroleum ether), iodo-methylate, melting point 102-103° (from alc.-acetone). The mixture of 20 ml of alcohol solution of 3 g of IX and of the solution of 6.5 g of N-chloracetyl-2-methyl-5,6,7,8-tetrahydro-1-naphthylamine in 100 ml of hot alcohol was boiled 2.5 hours, filtered, alcohol was distilled off, the residue was mixed with 100 ml of water and 100 ml of C₆H₆, and VI was separated from the benzene layer, yield 59%, melting point 146-147° (from alcohol). The solution of 50 g of 2-methylmercaptoethylchloride in

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Chemistry.

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Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25120

Author : Exner, O.

Inst : -

Title : Oxime Derivatives. IV. Attempted Syntheses of N-Acyl
Derivatives of Oximes.

Orig Pub : Chem. listy, 1956, 50, No 5, 779-790; Sb. chekhosl. khim.
rabot, 1956, 21, No 6, 1500-1512

Abstract : Attempts were made to synthesize N-acyl oximes of the
type of $RR'C-N(O)COR$ by oxidation of N-substituted
hydroxamic acids with HgO , and condensation of hydroxamic
acids with acetals. On oxidation of N-benzhydryl-benzhy-
droxamic acid (I) with HgO there is formed a small amount
of O-benzoyloxime of benzophenone (II). It is shown that
II is formed over the N-benzoyl-benzophenone oxime (III).
This is confirmed by the different course of the reaction

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Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25120

phenyl-isocyanate. Attempts to oxidize XII to III, with HgO, H₂O₂ or CH₃COOH, failed. A mixture of 0.05 mole N-benzhydryl-hydroxylamine (yield 58%, MP 75°), 11 g KHCO₃, 100 ml water and 0.103 mole C₆H₅COCl, was shaken for 5 hours and allowed to stand for 12 hours. The product was extracted with 10% aqueous NaOH, and acidified with CH₃COOH. I was obtained, yield 48%, MP 192° (from acetone), and an alkali-insoluble substance, C₂₄H₁₅O₂N, yield 4.9 g, MP 94° (from alcohol). By benzylation of (*)V benzhydryl-hydroxylamine, yield 87%, MP 131 (from alcohol). By reduction of I with LiAlH₄ in a mixture of ether and C₆H₆ was prepared N-benzyl-N-benzhydryl-hydroxylamine, yield 91%, MP 109°. Solution of 1.9 g I in dry trichlorethylene (50 ml) was boiled for 6 hours with HgO, filtered and the solvent was evaporated. II was obtained, yield 16%. MP 101° (from alcohol). 4.54 g IV

Card 4/6 (*) I with C₆H₅COCl in 5% aqueous NaOH, was prepared), N-di-benzoyl-N-...

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Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 25120

heated at 100° and 15 mm for 30 minutes to get XII, yield 93%, MP 124° (from alcohol). Synthesis of XIII was effected from C_6H_5CN and C_6H_5MgBr (see Moureu, Mignonac, C. r. Acad. Sci., 1920, 170, 1353), yield 35%, MP 117° (from cyclohexane). Boiling of 0.01 mole XIII with 0.6 g $LiAlH_4$ in 30 ml tetrahydrofuran, for 5 hours, gave 94% XIV, MP 170 and 175° (two forms). Communication III see RZhKhim, 1955, 42948.

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Structure of the isomeric Hydroxyureas
(Czech. Acad. Sci. Prague, Chem. Listy 53, 215, 1958). Hydroxyurea (I) and isohydroxyurea (II) were treated with Bz_2O in pyridine and the reaction products subjected to the Losch degradation to give from I 65% BzOH and gaseous products; II yielded 13% PhNHCONH_2 and 52% PhNHCONHPh . This proves that I and II possess the structures NH_2CONHOH and NH_2CONHPh , resp. NH_2CONHOH , m. 130°, NH_2CONHPh .

EXNER O.; WICHTERLE, O.

"Reaction of some unsaturated sulfonic acids with halogens. In german. "

P. 497 Journal on chemistry and biochemistry issued by the, (Czechoslovak Academy of Sciences.) Vol. 22, no. 2, Apr. 1957.

SO: Monthly Index of East European Accession (EEAI) LC, Vol. 7, No. 5 May 1958

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Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 21359

way, yield 87%, melting point 145° (dissociates). IV crystallizes from alcohol partly dissociating. Not II, but dibenzhydroxamic acid is formed by benzoylating I with benzoyl chloride in pyridine 10 min., yield 37%, melting point 156° (from alcohol). III was heated with CH₃ONa in CH₃OH 2 min. to 50°, the mixture was diluted with ether and shaken with water at 0°. After having been acidified with HCl (acid) to pH = 6 and evaporated until dry in vacuo at the bath temperature of 40°, the water layer produced I at a 93%-ual yield. Methyl ester of benzoic acid, $n_D^{20} = 1.5181$, identified as benzoic acid (V) after saponification was obtained from the ester layer at a 72%-ual yield. The alcoholysis of IV was carried out in a similar way. The reaction mixture was diluted with water, acidified with CH₃COOH to pH = 5 and the Cu salt of benzhydroxamic acid was precipitated with the aqueous solutions of Cu acetate (yield 92%). Benzhydroxamic acid, melting

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G-2

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 21359

point 130° (from ethylacetate) was liberated from the Cu salt of that acid with H_2S in CH_3OH medium with access of moisture. V was prepared by heating III in a bath of 170° for 2 to 4 min., cooling and a repeated heating to 170° for 1 min., extraction with 10%-ual soda solution and the extract acidification, yield 65%. IV was similarly pyrolyzed. Besides V, phenylurea (VI), melting point 148°, was separated from the residue insoluble in soda solution by extraction with boiling water, and N,N'-diphenylurea (VII), melting point 240°, was separated from the insoluble in water residue by crystallization from alcohol. III was heated with 0.5 n. NaOH for 15 min., the original VII (18%) was filtered off by suction and V (30%) was separated from the filtrate after acidification. The detection of hydrozine in the filtrate after V did not succeed. After a similar alkaline decomposition of IV, VII

Card 3/4

CZECHOSLOVAKIA / Organic Chemistry. Synthetic Organic Chemistry.

G

Abs Jour: Ref Zhur-Khimiya, No 18, 1958, 60941.

Abstract: in glacial CH_3COOH and aqueous (about 30%-ual) H_2O_2 + 1 drop of H_2SO_4 is left to age 3 days at 20° , heated at 100° 15 or 60 min. and evaporated at $60^\circ/15$ mm. II is produced using 108% of the theoretical amount of H_2O_2 ; monohydrate - melting point 166° (from water) - loses water on P_2H_5 at $100^\circ/0.2$ mm. Water free II was identified by comparing with the interaction product of sodium toluene- α -sulfonate (IV) with I hydrochloride. The oxidation of I with an excessive amount of H_2O_2 (3.5 ml of solution per 0.01 mole of I) produces III, melting point 145° (from acetone), which is identical with the interaction product of IV with urea. Ammonium toluene- α -sulfonate and cyanuric acid are forming at a short heating of III to 180° .

Card 2/2

28

Reduction of piperazines. Otto Exner (Czechoslovakia, 1st, Prague). - Chem. listy 51, 2035-8, 1957. Reduction of lauro-4-allyl-2-cyclohexanol II with LiAlH₄ gave cyclohexanone oxime II'. 155

NaNO₂ in 80 ml. H₂O, adding 1 g. acidifying with 10 ml. HCl (d₁₅ = 1.17), adding 150 g. iron, and the blue crystals with suction, washing with H₂O, and drying over P₂O₅ gave 8.5 g., m. p. 76°. Adding 1.58 g. Li in 30 ml. C₂H₅ to 0.5 g. LiAlH₄ in 20 ml. tetrahydrofuran (THF), keeping the temp. at 15°, decompose the same mixture with

washing the resulting white solid gave 78% of the HCl salt of 11. For LiCl , 1.0 g. to react with N_2O_5 in CH_2Cl_2 during 20 min. 1 g. in CH_2Cl_2 to 1 g. LiAlH_4 in 10 min.

[illegible]

CZECHOSLOVAKIA / Organic Chemistry--Synthetic organic chemistry. G-2

Abs Jour : Ref Zhur - Khimiya, No 14, 1959, No. 49483

Author : Protiva, M.; Exner, O.; Borovicka, M.

Inst : Not given

Title : Antihistamine Compounds. XLIII. Derivatives of
Diphenylhydramine with Polar Substituents

Orig Pub : Ceskoslov Farmac, 7, No 7, 380-385 (1958)

Abstract : Continuing their work on the synthesis of antihistamine compounds, the authors have apparently synthesized
4-HOC₆H₄CH(C₆H₅)OCH₂CH₂N(CH₃)₂ (I) by the reaction of
4-CH₃COOC₆H₄CH(OH)C₆H₅ (II) with ClCH₂CH₂N(CH₃)₂ (III).
The isomer of I, 4-(CH₃)₂NCH₂CH₂OC₆H₄CH(OH)C₆H₅ (IV) has
been synthesized by the scheme: 4-HOC₆H₄COOC₆H₅ (V) →
4-(CH₃)₂NCH₂CH₂OC₆H₄COOC₆H₅ (VI) → IV. In addition,
4-NH₂C₆H₄CH(C₆H₅)OCH₂CH₂N(CH₃)₂ (VII) has been synthesized

Card 1/8

CZECHOSLOVAKIA / Organic Chemistry--Synthetic organic chemistry. G-2

Abs Jour : Ref Zhur - Khimiy⁴, No 14, 1959, No. 49483

over 15 min (the temperature rises from 60 to 65°), the solution is stirred while cooling, 200 ml ice water are added, the solution is acidified with 80 ml conc HCl and 4-CH₃COOC₆H₄-COC₆H₅ (XVIII) is isolated, yield 93%, mp 81° (corrected; from alc). 26.5 gms XVIII in 200 ml CH₃OH are hydrogenated over 5 gms Raney Ni (20°, 90 atm, 1.5 hrs, 2.8 liters H₂), and II is isolated from the filtrate, yield 82%, bp 155 - 160°/0.2 mm. 7.3 gms II, 3.8 gms III, and 2 gms of 70% NaNH₂ solution in 40 ml abs C₆H₆ are refluxed for 7 hrs, 100 gms ice and 15 ml conc HCl are added on cooling, the solution is extracted with ether, the aqueous layer is made alkaline with 40% NaOH and extracted with ether to give I, 44% yield, bp 163 - 165°/0.4 mm, picrate (PC) mp 150° (corrected; from alc). 17 gms V are added to a

Card 3/8

CZECHOSLOVAKIA / Organic Chemistry--Synthetic organic chemistry. G-2

Abs Jour : Ref Zhur - Khimiya, No 14, 1959, No. 49483

immediately poured into cold water; the substance which separates is dissolved in 750 ml alc and 700 ml water to give 34% X, mp 151° (corrected; from alc). 34 gms X in 1.5 liter alc are reduced with amalgam (7 gms Na and 250 gms Hg) at 15°, the solution is left to stand 48 hrs at about 20°, 3 liters water are added to the filtrate, and XI is isolated, yield 82%, mp 157° (corrected; from ethyl acetate). 9.1 gms XI, 3.8 gms III, and 2 gms 70% NaH₂ in 60 ml C₆H₆ are refluxed for 7 hrs, 100 gms ice and 15 ml conc HCl are added on cooling, the solution is washed [sic] with ether, the aqueous layer is made alkaline with 40% NaOH, extracted with ether, the solvent is removed, and 9.4 gms of the residue are converted to the PC of XII, mp 170° (corrected; from acetone-ether); the PC

Card 5/8

CZECHOSLOVAKIA / Organic Chemistry--Synthetic organic chemistry. G-2

Abs Jour : Ref Zhur - Khimiya, No 14, 1959, No. 49483

additional 30 min, hydrolyzed with 200 ml water and 30 ml (1 : 1) HCl, evaporated under vacuum, and the residue is extracted with ether to give 84% yield of XV, mp 74° (from C₆H₁₄). 5.7 gms XV, 3.2 gms III, and 1.6 gms 70% NaNH₂ in 30 ml C₆H₆ are refluxed for 7 hrs, the solution on cooling is hydrolyzed with 50 ml water, diluted with 100 ml C₆H₆ to give 61% XVI, mp 205° (corrected; from dioxane). 21.3 gms XVII at 160° are treated over 30 min with 18.7 gms Br₂, the solution is heated for 3 hrs at 160°, and diluted with 50 ml C₆H₆ to give XIV, bp 170 - 190°/1 mm. 5.9 gms SV and 4.5 gms PBr₃ are mixed at 0°, the solution is allowed to stand about 12 hrs at about 20°, followed by 2 hrs at about 100°, hydrolyzed with 50 ml water and extracted with 50 ml C₆H₆ giving 6.8 gms XIV, mp

Card 7/8

Country	: Czechoslovakia	G-2
Category=	: Organic Chemistry. Synthetic Organic Chemistry	
Abs. Jour.	: Ref. Zhur.-Kimiya No. 6, 1959	19421
Author	: Exner, O.	
Institut.	: _____	
Title	: On Oxidation of Isothiuronium Salts	
Orig. Pub.	: Collect. czechosl. chem. commun., 1958, 23, No 7, 1314-1318	
Abstract	: See RZhKhim, 1958, 60941.	

Card: 1/1

Matrix IR3d 7
 infrared spectroscopy of carboxylic acid derivatives.
 Milan Horák and Otto Ruzar (Českoslov. akad. věd, Prague). Chem. Abstr. 52, 1451-9(1958).—Valence vibrations of the CO bond were measured in 50 derivs. under standard conditions in dioxane. The frequency values in the individual compds. change regularly and analogically in dependence on the function group and can be thus expressed by an equation by means of experimentally detd. const. The position of the CO max. is given by a straight line equation $\nu_{CO} = kx + q$, where k is the const. for a certain acid, x is the const. for a certain deriv. and q is the const. mutual to all measured compds. Where $q = 1513.9 \text{ cm}^{-1}$, k for the following acids is given: $\text{CCl}_3\text{CO}_2\text{H}$ 1.212, $\text{NCCH}_2\text{CO}_2\text{H}$ 1.140, AcOH 1.113, $\text{H}_2\text{NCO}_2\text{H}$ 1.076, $p\text{-O}_2\text{NC}_6\text{H}_4\text{CO}_2\text{H}$ 1.029, BuOH 1.000, $p\text{-H}_2\text{NC}_6\text{H}_4\text{CO}_2\text{H}$ 0.875, $p\text{-HOC}_6\text{H}_4\text{CO}_2\text{H}$ 0.797. Also, x for various acid derivs. is as follows: bromide 270.8, chloride 264.1, anhydride 251.5, Ph ester 228.1, Me ester 213.4, acid 209.2, Et ester 208.6, amide 173.2, anilide 164.3, hydrazide 159.5, hydroxamic acid 148.7. This relationship can be used to predict the frequencies of further compds. of a given type. Various factors influencing the CO frequency are discussed. The polar effect of a directly bound atom is the most important and thus enables to differentiate compds. having a N- or O-bound acyl in comparison with simple deriva. L. J. Urbánek

5
1

no. 2

COUNTRY : Czechoslovakia B-4
CATEGORY :
ABS. JOUR. : RZhKhim., No. 1959, No. 84,900
AUTHOR : bxner, O.; Borak, M.
INST. :
TITLE : Infrared Spectroscopy of Derivatives of
Carboxylic acids
ORIG. PUB. : Collect. Czechosl. Chem. Commun., 1959, 24,
No 3, 968-977
ABSTRACT : See RZhKhim, 1959, No 16, 56128.

CARD:

EXNER, O.

The configuration and conformation of the *O*-alkyl hydroxamic acids. O. Exner, V. Jechlička, and A. Reiser (Lab. makromol. chem. CSAV, Prague). *Collection Czechoslov. Chem. Commun.* 24, 3207-21(1959).—The configurations of *O*-alkyl hydroxamic acids were detd. from the dipole moments of the *syn*- and *anti*-*O*-ethyl benzohydroxamic acids and of the corresponding *O*-ethyl-*p*-nitrobenzohydroxamic acids. The configurations found were just opposite to those accepted by Werner. B. Eids-

5
1-0x7 (NB)

EXNER, O.

Correlation of dipole moments with substitution constants. Coll Cz
chem 25 no.3:642-656 Mr '60. (EEAI 9:12)

1. Jetzige Adresse: Polarographisches Institut, Tschechoslowakische
Akademie der Wissenschaften, Prag.
(Substitution(Chemistry))
(Electric moment)

EXNER, O.

Problem of additivity in Hammett and Taft equations. Coll Cz Chem
25 no.4:1044-1051 Ap '60. (EEAI 9:12)

1. Polarographisches Institut, Tschechoslowakische Akademie der
Wissenschaften, Prag
(Additivity) (Hammett equation)

VIKHTERLE [Wichterle], O.; EKSNER [Exner], O.

Problem of the synthesis of polypeptides by means of reaction of amides with alcoholates. Coll Cz Chem 25 no.5:1371-1376 My '60.

1. Institut makromolekulyarnoy khimii, Chekhoslovatskaya Akademiya nauk, Praga.

EXNER, O.

On acyl derivatives of hydroxylamines. Part 4: On the existence of so called kaliumoxyfulminates. Coll Cz Chem 25 no.5:1517-1519 My '60.

1. Institut für makromolekulare Chemie, Tschechoslowakische Akademie der Wissenschaften; jetzige Anschrift: Polarographisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag.

EXNER, O.; KAKAC, B.

Acyl derivatives of hydroxylamine. V. Acylation of derivatives of
hydroxylamine. Coll Cz chem 25 no.10:2530-2539 0 '60.
(EEAI 10:9)

1. Institut de polarographie de l'Academie des sciences tchecoslo-
vaque, Prague et Institut de recherches pharmaceutiques et biochimiques,
Prague.

(Acylation) (Hydroxylamine)

EXNER, O.

Application of empirical linear relationships to preparative data.
Coll Cz chem 26 no.1:1-12 Ja '61. (EEAI 10:9)

1. Polarographic Institute, Czechoslovak Academy of Science, Prague.

(Differential equations)
(Chemistry, Physical and theoretical)

EXNER, O.

Acyl derivatives of hydroxylamine. VI. Constitution of hydroxybiuret
and hydroxydiphenylbiuret. Coll Cz Chem 26 no.3:701-709 Mr '61.
(EEAI 10:9)

1. Polarographisches Institut, Tschechoslowakische Akademie der
Wissenschaften, Prag.

(Biuret) (Acyl groups) (Hydroxylamine)
(Hydroxy compounds) (Phenyl group)

EXNER, O.

CZECHOSLOVAKIA

No academic degree indicated

Polarographic Institute (Polarographisches Institut), Czechoslovak
Academy of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communications, No 10,
October 1962, pp 2284-2295

"On the Acyl derivatives of the Hydroxylamines VII. On the Constitution
and Configuration of the Triacyl derivative."

LANER, O.

CZECHOSLOVAKIA

No academic degree indicated

Polarographic Institute, Czechoslovak Academy of Science, Prague

Prague, Collection of Czechoslovak Chemical Communications, No 10,
October 1962, pp 2296-2306

"Quantitative Evaluation of the Inductive Effect."

Co-author:

JONAS, J., Institute of Organic Chemistry and Biochemistry, Czechoslovak Academy of Science, Prague

EXNER, O.

On acyl derivatives of hydroxylamines. Part 7 : Constitution and configuration of triacyl derivatives. Coll Cz chem 27 no.1:2284-2295 0 '62.

1. Polarographisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag.

JANDA, M.; DVORAK, F.; EXNER, O.

Chlormethylation in the thiophene group. Part 4: On the α -substituted 5-methylthiophene-2-carbonic acid and 5-methylpyromusic acid. Coll Cz Chem 27 no.5:1191-1198 My '62.

1. Institut für organische Chemie, Technische Hochschule für Chemie, Prag (for Janda and Dvorak). 2. Polarographisches Institut, Tschechoslowakische Akademie der Wissenschaften, Prag (for Exner).

EYNER, O.; JONAS, J.

Quantitative evaluation of the inductive effect. Coll Cz chem 27
no.10:2296-2236 0 '62.

1. Polarographic Institute, Czechoslovak Academy of Sciences, Prague
(for Ezner). 2. Institute of Organic Chemistry and Biochemistry,
Czechoslovak Academy of Sciences, Prague (for Jonas).

EXNER, O

Czechoslovakia

Polarographic Institute, Czechoslovak Academy of Science --
Prague - (for all

Prague, Collection of Czechoslovak Chemical Communications,
No 4, 1963, pp 935-941

"Characteristic Vibrations of the Sulfonyl Group."

EXNER, O; KAKAC, B.

CZECHOSLOVAKIA

1. Polarographic Institute of the Czechoslovak Academy of Sciences, Prague; 2. Research Institute for Pharmacy and Biochemistry, Prague (for both)

Prague, Collection of Czechoslovak Chemical Communications,
No 7, 1963, pp 1656-1662

"Acyl Derivatives of Hydroxylamine. VIII. A Spectroscopic
Study of Tautomerism of Hydroxamic Acids."

EXNER, O.

CZECHOSLOVAKIA

Polarographic Institute of the Czechoslovak Academy of
Sciences (Polarographisches Institut der Tschecho-
slowakischen Akademie der Wissenschaften), Prague
Prague, Collection of Czechoslovak Chemical Communications,
No 11, 1963, pp 3145-3149

"Oximderivatives. VI. On the Question of the Existence of
N-Sulfonyl Derivatives."

EYNER, O.

Characteristic vibrations of the sulfonyl group. Coll Cz
Chem 28 no.4:935-941 Ap '63.

1. Polarographic Institute, Czechoslovak Academy of Sciences,
Prague.

EXNER, O.; KAKAC, B.

Acyl derivatives of hydroxylamine. Pt.8. Coll Cz Chem 28
no.7:1656-1663 J1 '63.

1. Polarographic Institute, Czechoslovak Academy of Sciences,
Prague, and Research Institute for Pharmacy and Biochemistry,
Prague.

EXNER, O.

Oxime derivatives, Pts 6-7. Coll Cz Chem 28 no.11:3145-3154
N°63.

1. Polarographisches Institut, Tschechoslowakische Akademie
der Wissenschaften, Prag.

EXNER, C.

On the enthalpy-entropy relationship. Coll Cz Chem 29 no.5:1094-1113
My '64.

1. Institute of Polarography, Czechoslovak Academy of Sciences, Prague.

TALVIK, A.; ZUMAN, P.; EXNER, O.

Studies on the inductive effect. Pt.3. Coll Cz Chem 29 no.5:
1266-1276 My '64.

1. Institute of Polarography, Czechoslovak Academy of Sciences,
Prague (for Zuman and Exner). 2. Chemical Department, Tartu State
University, Tartu, Estonian S.S.R. (for Talvik).

EXNER, O.

Acyl derivatives of hydroxylamine. Pt.9. Coll Cz Chem 29
no. 6:1337-1343 Je '64.

1. Institute of Polarography, Czechoslovak Academy of Sciences,
Prague.

RENER, O.; SIMON, W.

Studies on the inductive effect. Pt. 4. Coll Cz Chem 29 no.9:
2016-2022 S '64.

J. Polarographic Institute, Czechoslovak Academy of Sciences,
Prague.

EXNER, O.

"Laboratory technique in organic chemistry" by B. Keil and
others. Reviewed by O. Exner. Chem listy 58 no. 2:247-243
F 164.

CZECHOSLOVAKIA

EXNER, O

J. Heyrovsky Institute of Polarography, Czechoslovak Academy
of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communications,
No 1, January 1966, pp 65-89

"Studies on the inductive effect. Part 5: Separation of inductive
and mesomeric effects in meta and para benzene derivatives."

L 31589-66

ACC NR: AP6022957

polarization of the S atom than that of the O atom may reverse the order of the substituents. The presence of electronegative groups weakens the conjugation of the S atom. The steric effect can be evaluated only in compounds of a similar type. The effects cannot be compared in different series of compounds. A method that can be used for its evaluation is based on measuring the acidity of 2 isomeric acids. Orig. art. has: 5 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 007 / SOV REF: 004
OTH REF: 038

Card 2/2 *BLG*

EXNER, O.; JEHLICKA, V.

Determination of configuration and conformation of complicated molecules on the basis of dipole moments. Coll Cz Chem 30 no.3: 639-651 Mr '65.

1. J. Heyrovsky Institute of Polarography of the Czechoslovak Academy of Sciences, and Department of Physical Chemistry of the Institute of Chemical Technology, Prague. Submitted April 9, 1964.

EXNER, O.

Acyl derivatives of hydrozylamine. Pt.10. Coll Cz Chem 30 no.3:
652-663 Mr '65.

1. J.Heyrovsky Institute of Polarography of the Czechslovak
Academy of Sciences, Prague. Submitted April 9, 1964.

CZECHOSLOVAKIA

EXNER, O

J. Heyrovsky Institute of Polarography, Czechoslovak
Academy of Sciences, Prague

Prague, Collection of Czechoslovak Chemical Communi-
cations, No 1, January 1967, pp 1-23

"Additive physical properties. Part 2: Molar volume
as an additive property."

CZECH

1/Statistical methods in tannery analyses. Rudolf Exner
(Závody Antonína Zápotockého, n.p., Jaromer, Czech.)
Industriál 4, 93-3(1954).—A review and math. analysis of
probabilities. Quadratical error in leather analysis is 20%—
in split leather higher, in calf leather smaller. For the lit-
tuning of mean error $\pm 10\%$, 18 tensile strength detns. are
necessary. For sole leather the mean value of tensile
strength along and across the spine should be given. A
min. of 5 samples in the leather analysis is mathematically
necessary.
L. Marner

EYNER, Rado

CZECH

✓ Cation-active products in tanning. Rudolf Exner, Závody
Antonína Zápotockého, n.p., Jaroměř, Czech. ^{1/2} Kolařská

OVER

4. 191-8 (1964).--Ionic active and nonionic substances in tanning are reviewed. The former form salt linkages with collagen, the latter are coordinately bound. Cation-active fat liquors can be used with advantage in the fat-liquoring of suede leather. L. has developed a cation-active amino-resin through condensation of alkylated amines and phenol or o-cresol with HCHO by using the reactions of Hassler (C. 4. 31, 6643; 34, 6557; 35, 1975; 36, 2178; 38, 2269). The resin does not have much surface activity. Phenolic groups in the mol. are weakly electroneg. and are bound to electroneg. leather, if the NH₂ groups of collagen are hydrated. NH₂ salts change on heating with HCHO to methylolamines, which is condensed with phenol and more HCHO. The resin (I) contains 3.20% of bound and 0.40% of free N. The complete analysis corresponds to (C₁₁H₁₀ON). One g. of tannin of quebracho, chestnut, valonea, spruce, Kortan Qu 1, and Syntan SN₂ need for complete pptn. 0.76, 6.65, 0.63, 0.20, 0.63, and 0.55 g. of I, resp. One g. of Chromlederblau H and Velourteigrün need for a complete pptn. 0.13 and 0.25 g. of I, resp. Surface tension, foam formation, and wetting activity were also detd. The free base can be obtained as a yellow ppt. by NH₄. KCNS pptn. I. Solns. of anionic dyes are quantitatively pptd. by I. This can be used in dyeing leather. I fixes tannins in leather. I can be used also in the textile industry. Vegetable-tanned leather (II) is washed, treated with 1% lactic acid in 200% water, and drummed 2 hrs. Ten % of I (50% solids), dild. 1:5 with H₂O, is added, and drumming is continued 3-4 hrs. The water-solubles of II can be cut to half by treatment with 1% of I in 100% H₂O at 40-60° for 30-60 min. II can also be impregnated by I. I can be used in dyeing of II (1-2%) and also in table-dyeing of glove leather with anionic dyes.

L. Masner

COUNTRY : Czechoslovakia
 CATEGORY : Chemical Technology. Chemical Products and Their Applications--Leather. Fur. Gelatin. Tanning*
 ABS. JOUR. : AZKhim., No. 16 1959, No. 59514
 AUTHOR : Exner, R. and Kacet, J.
 INST. : Not given
 TITLE : The Effect of Syntan on the Formation of Precipitates in Solutions of Vegetable Tanning Agents and on the Physical Properties of Leather
 ORIG. PUB. : Veda Vyzk v Prumyslu Kozedeln, 3, 63-77 (1958)
 ABSTRACT : A method for the determination of the precipitate by filtration of the solution under test after cooling to zero degrees is described. Application of the above treatment results in an increase in the size of the precipitate particles; the filtration of the solution is continued until complete optical transparency is obtained. The method gives good results in the investigation of the tendency to precipitate formation in binary and ternary mixtures of

CARD: 1/2 *materials. Industrial proteins

COUNTRY : Czechoslovakia
 CATEGORY : H-35
 ABS. JOUR. : RZKhim., No. 1950, No. 88879
 AUTHOR : Exler, R.
 YYY. :
 TITLE : Production of Artificial Fibrous Leather

ORIG. PUB. : Kozarstvi, 1958, 8, No 3, 75-77

ABSTRACT : For the making of artificial fibrous leather use is made of the waste of chrome leather as well as of vegetable tanned leather. The properties of these 2 groups of starting material are described. In both instances the hydrophilic properties depend upon the degree of fat-liquoring of the leather. Rate of soaking and fibril separation of chrome-leather waste is considerably lower than that of vegetable tanned leather waste. The latter, when it is derived from strongly tanned leather with brittle fibrils (stiff soiling leathers), requires thorough washing and detannage in weak alkaline solutions. Waste of mechanical and harness leather can be utilized without such a

CARD: 1/3

EXNER, Rudolf

Leather substitutes in the production of technical goods.
Kozarstvi 14 no. 4:122-123 Ap '64.

1. Vyrobní hospodarska jednotka Zavody Antonina Zapotockeho,
Jaromer.

EXNER, Stefan

Fluorine in products of the superthomazine manufacturing process. Przem chem 39 no.1:28-32 Ja '60.

1. Zakładowe Laboratorium Badawcze, Fabryka Supertomasyny, Bonarka.

EXNER, Stefan

The variability of the parameters of the cooling process and the solubility of P_2O_5 in superthomassine. Przem chem 40 no.10:580-583 0 '61.

1. Zakladowe Laboratorium Badawcze, Fabryka Supertomasyny, Krakow.

EXNER, Stefan

"Protection against dust pollution" by J. Juda. Reviewed by
Stefan Exner. Przem chem 41 no.10:606 0 '62.

EXNER, Stefan, mgr

Air pollution combat action in the Superthomazine Plant. Chemik
16 no.1:24-25 Ja '63..

1. Laboratorium Badawcze Fabryki Supertomasyny, Krakow.

EXNER, Stefan

Variability of the parameters of the cooling process and the solubility of P_2O_5 in superthomazine. Przem.chem 40 no.10:580-583 0 '61.

1. Zakładowe Laboratorium Badawcze, Fabryka Suoertomasyny, Krakow.

KRAKOWSKI, Jan, prof. mgr inz.; MATEJSKI, Ryssard, mgr inz.;
EMER, Stefan, mgr inz.

Results of initial studies of separating, by the foam method,
superthomasine dust from gases. Gosp paliw 11 no.7:256-257
Jl '63.

EXNER, Stefan

"Handbook of the Association of German Engineers on
Keeping the Air Clean. Reviewed by Stefan Exner.
Przem chem 42 no.6:337-338 Je '63.

EXNER, Stefan

Our way of combating air pollution; from experiences of the
Thomas Slag Works in Krakow. Przegł techn 84 no.1:6, 7 6 Ja
'63.

EXNEROVA, Edith

Mental reactions in puberal girls during gynecological examination.
Cesk. gyn. 25[39] no. 1/2:97-101 Mr'60.

1. III. porodnicka klinika EU, prednosta prof. dr. R. Peter, Dr. Sc.
Katedra psychologie, vedouci prof. dr. J. Dolezal.
(PHYSICAL EXAMINATION)
(GYNECOLOGY)
(ADOLESCENCE psychol.)

EXNEROVA, M. (Praha-Krc, Budejovicka 800)

Retinal detachment as an early complication of hydrophthalmos. Cas. oft.
15 no.2:225-228 June 59.

1. Očni oddeleni Thomayerovy nemocnice v Praze 14, prednosta prim. dr.
M. Exnerova.

(HYDROPTHALMOS, compl.

retinal detachment as early compl. (Cz))

(RETINAL DETACHMENT

as early compl. of hydrophthalmos (Cz))

EXNEROVA, M.

Keratomalacia in an infant. Cesk. oftal. 19 no.3:179-183
My '63.

1. Oční oddelení Thomayerovy nemocnice v Praze-Krci, vedoucí
MUDr. M. Exnerova.

(KERATOCONJUNCTIVITIS) (CORNEAL DYSTROPHIES)
(STAPH INFECTIONS) (VITAMIN A DEFICIENCY)
(PREGNANCY COMPLICATIONS) (INFANT, NEWBORN, DISEASES)

EXNEROVA, M.; KLINOVA, A.

Results of conservative treatment of patients with glaucoma.
Cesk. oftal. 20 no.6:428-433 N '64.

1. Oční oddelení Thomayerovy nemocnice v Praze 4, (vedoucí
MUDr. M. Exnerova).

SENTEROVA, H., MUDr.

Experiences with surgical treatment of glaucoma. Czech. ophthalmol.
21 no.34188-194 My '65

1. Oční onemocnění Thomayerovy nemocnice v Praze (for 1965 MUDr.
H. Senterova).

EYBATOV, M.D., starshiy inzh.

Testing diamond bits in deep drilling. Neftianik 7 no.3:8-9
Mr '62. (MIRA 15:5)

1. Promyslovaya laboratoriya TSekha nauchno-issledovatel'skikh
proizvodstvennykh rabot neftepromyslovogo upravleniya Karadagneft'.
(Karadag region--Boring machinery)

EYBATOV, M.D.

Oil field No.2 of the Oil Field Administration of the Karadag
Petroleum Trust is a collective of communist labor. Neftianik 7
no.12:3-4 D '62. (MIRA 16:6)

1. Starshiy inzh. promyslovoy laboratorii tsekha nauchno-
issledovatel'skikh i proizvodstvennykh rabot Neftepromyslovogo
upravleniya Karadagneft'.
(Karadag region--Petroleum production)

EYBATOV, M.D.

Attachment for pressing out crank pins. Mash. i nef. obor.
no.5:35 '63. (MIRA 17:8)

1. Tsekh nauchno-issledovatel'skikh i proizvodstvennykh rabot
neftepromyslovogo upravleniya "Karadagneft'", g. Baku.

ABDULLAYEV, Z.S.; EYBATOV, M.K., starshiy inzh.

Device for fastening a core lifter. Neftianik 6 no.11:19-20
N '61. (MIRA 14:12)

1. Nachal'nik laboratorii bureniya TSekha nauchno-issledovatel'skikh
proizvodstvennykh rabot neftepromyslovogo upravleniya Karadagneft'
(for Abdullayev).
(Core drilling)

EYBATOV, M.K., starshiy inzh.

Capron sand filter. Neftianik 7 no.6:31 Je '62. (MIRA 15:8)

1. TsNIIPR Neftepromyslovogo upravleniya Karadagneft'.
(Filters and filtration)

Country : USSR 0
Category : Plant Diseases. Diseases of Cultivated Plants.
Abs Jour. : Ref. Zhur.-Biologiya No. 11, 1958. No. 49250
Author : Fybatova, A.D.
Institute : Azerbaydzhan Sci. Res. Inst. for Cotton Raising
Title : Principal Diseases of Alfalfa in the Azerbaydzhan
Soviet Socialist Republic
Orig. Pub.: Byul. nauchno-tekhn. inform. Azerb. n.-i. in-t
khlopkovodstva, 1957, No. 2, 66-69
Abstract : In the cotton growing rayons of Azerbaydzhan,
alfalfa is attacked principally by leaf spot,
Pseudopeziza medicaginis), yellow leaf spot
(P. Jonesii), rust (Uromyces striatus) and mildew
(Leveillula taurica). Leaf spot and rust are the
most injurious. The destructiveness, certain
biological characteristics of the fungi and con-
trol measures are specified.--G.A. D'yakova
Card: 1/1

HYBATOVA, Sh.E.
KOSHELEVA, L.M.; MAMEDOVA, A.R.; PISHNAMAZZADE, B.F.; RZAYEVA, S.Z.; SULTANOV,
G.A.; KHALILOV, A.Kh.; HYBATOVA, Sh.E.;

On the possible presence of seven-membered naphthenic hydrocarbons in petroleum. Dokl.AN Azerb.SSR 10 no.6:421-426'54.

(MLRA 8:10)

1. Institut nefti Akademii nauk Azerbaydzhanskoy SSR i Institut fiziki i matematiki Akademii nauk Azerbaydzhanskoy SSR. Predstavleno deystvitel'nym chlenom Akademii nauk Azerbaydzhanskoy SSR V.S.Gutyrya.

(Naphthene) (Petroleum)

PISHNAMAZZADE, B.F.; KOSHELEVA, L.M.; BYRATOVA, Sh.E.

~~Formula for calculating the amount of petroleum fractions (with small amounts of aromatic hydrocarbons) charged into a column for adsorptive separation.~~ Formula for calculating the amount of petroleum fractions (with small amounts of aromatic hydrocarbons) charged into a column for adsorptive separation. Dokl. AN Azerb. SSR 11 no. 7:447-457 J1 '55. (MLRA 9:1)

1. Institut nefti AN Azerbaydzhashskoy SSR.
(Petroleum)

MEKHTIYEV, S.D.; PISHNAMAZZADE, B.F.; KOSHELEVA, L.M.; MYBATOVA, Sh.Z.;
GASHIMOVA, F.A.

Separation of individual hydrocarbons from petroleum. Report no.1:
Separation of cyclohexane [in Azerbaijani with summary in Russian].
Izv. AN Azerb. SSR. Ser. fiz.-tekhn. i khim. nauk no.5:53-65 '58.
(MIRA 12:1)

(Cyclohexane)

EYBATOVA, Sh. E.

НАУЧНО-ТЕХНИЧЕСКАЯ
И ЕГО НАУЧНО-ТЕХНИЧЕСКАЯ
НАУЧНО-ТЕХНИЧЕСКАЯ
А. М. ЕВМЕНОВ, С. Е. ЕВМЕНОВ, С. О. ЕВМЕНОВ,
И. Е. ЕВМЕНОВ, О. А. ЕВМЕНОВ

VIII Mendeleev Congress for General and Applied Chemistry in
Section of Chemistry and Chemical Technology of Fuels,
publ. by Acad. Sci. USSR, Moscow 1979

abstracts of reports scheduled to be presented at above mentioned congress,
Moscow, 13 March 1979.

PISHNAMAZZADE, B.F.; KHALILOV, A.Kh.; KOSHELEVA, L.M.; EYBATOVA, Sh.Z.;
RZAYEVA, S.Z.; MAMEDOV, F.A.

Individual hydrocarbon composition of straight-run gasolines
from the Gyurgyan maritime petroleum field of the Sub-Kirmaki
series. Azerb. khim.zhur. no.4:45-58 '59. (MIRA 14:9)
(Gasoline) (Hydrocarbons) (Gyurgyan—Petroleum)

MEKHTIYEV, S.D.; PISHNAMAZZADE, B.F.; KOSHELEVA, L.M.; EYBATOVA, Sh.E.

Separation of individual hydrocarbons from petroleum. Report
No.2: Separation of methylcyclopentane and methylcyclohexane.
Azerb.khim.zhur. no.6:3-12 '59. (MIRA 14:9)
(Cyclohexane) (Cyclopentane)

PISHNAMAZZADE, B.F.; ISMAILZADE, I.G.; KOSHELEVA, L.M.; EYBATOVA, Sh.E.;
MAMEDOV, F.A.

Hydroaromatic hydrocarbons of the fraction 140-175°C in crudes of
the lower formation of the Karachukhur Field. Azerb.khim.zhur.
no.3:65-75 '60. (MIRA 14:8)
(Hydrocarbons) (Petroleum—Analysis)

EYBATOVA, Sh. E.

34387
3/031/62/000/033/033/033
31. 2/2101

11. 0120
AUTHORS:

Pishnamazade, B. F., Ismailzade, I. G., Koshelova, L. L.
Mamedov, P. A., ~~Gashimova, P. A.~~, Eybatova, Sh. E.

TITLE:

Determination of the nature of aromatic and hydroaromatic
hydrocarbons in the fraction of a boiling point up to 200°C
of the petroleum from the Buzovinskoye deposit (Kirmakinskaya
formation)

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 3, 1962, 482, abstract
35132 (Azerb. khim. zh. no. 3, 1961, 41 - 53)

TEXT: The characteristics of the gasoline-ligroin fraction, final b. p.
220°C of petroleum from the Buzovinskiy deposit in the Kirmakinskaya for-
mation were determined. It was found that the light fraction with the
final b. p. 150°C had no aromatic hydrocarbons; the medium fractions
140 - 175°C and 175 - 200°C contain 0.73% and 4.12% aromatic hydrocarbons,
respectively. The wide gasoline-ligroin fraction is a naphthene-based
fraction with 71.36% naphthene hydrocarbons. Seven individual hydroaromat-
ic hydrocarbons were found in the fraction of b. p. 61 - 143°C. Among
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S/081/62/000/001/065/030
B142/2101

Determination of the nature ...

these, 1,4-dimethyl-cyclohexane (41.7%), and 1,2- and 1,3-dimethyl-cyclohexane (10% and 8.9%) present. The nature of the aromatic hydrocarbons was determined for 76.4% of the aromatic concentrate in the fraction 140 - 175°C. 13 individual aromatic hydrocarbons were found containing mainly 9 or 10 carbon atoms. 9.91% of the 175 - 200°C fraction were identified; the nature of two individual hydrocarbons was determined, viz. 1,2-diethylbenzene and 1,2,4,5-tetramethylbenzene. 50% of aromatic hydrocarbons isolated from 140 - 175°C fraction and 50% aromatic hydrocarbons separated from 175 - 200°C fraction have their boiling point higher than the terminal boiling point of the corresponding fraction. Three aromatic hydrocarbons in 140 - 175°C fraction corresponding to cyclohexane hydrocarbons were found in the fraction of b. p. 61 - 140°C, viz. 1,2,3,4-, 1,2,4-, and 1,3,5-trimethylbenzenes. [Abstracter's note: Complete translation.]

Card 2/2

PISHNAMAZZADE, B.F.; ISMAILZADE, I.G.; KOSHELEVA, L.M.; MAMEDOV, F.A.;
GASHUMOVA, F.A.; EYBATOVA, Sh.E.

Nature of aromatic and hydroaromatic hydrocarbons in the fraction
below 200°C of the Buzovna oil field of the Kirmaki series. Azerb.
khim.zhur. no.3:41-53 '61. (MIRA 14:11)
(Buzovna—Petroleum)
(Hydrocarbons)

PISHNAMAZZADE, B.F.; ISMAILZADE, I.G.; KOSHELEVA, L.M.; EYBATOVA, Sh.E.
MAMEDOV, F.A.; KULIKOVA, S.A.

Nature of hexahydroaromatic hydrocarbons from the 140-175° C
fraction of Surakhany selective oil. Azerb.khim.zhur. no.5:
9-21 '61. (MIRA 15:5)
(Hydrocarbons) (Surakhany—Petroleum—Analysis)

S/081/62/000/018/032/059
B158/B180

AUTHORS: Rishnamazzade, B. F., Ismailzade, I. G., Kosheleva, L. M.,
Eybatova, Sh. E., Mamedov, F. A.

TITLE: Examination of the nature of hexahydroaromatic hydrocarbons
in the 140-175°C fraction of Balakhano heavy oil

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1962, 442, abstract
18M103 (Azerb. khim. zh., no. 6, 1961, 27-36 [summary in
Azerb.])

TEXT: Twenty-five hexahydroaromatic hydrocarbons (HH), 23 of which are
monocyclic and 2 bicyclic, have been found by optical methods in the
dearomatized 140-175°C fraction of heavy Belakhano oil. Predominant
among the monocyclic hydrocarbons are: propylcyclohexane (4.35%),
1-methyl-2-ethylcyclohexane (2.65%), 1-methyl-3-ethylcyclohexane (2.31%)
and 1-methyl-4-ethylcyclohexane (2.07%); among the bicyclic - hydrindane
(2.58%). Of the HH found, the largest group, 43.83%, was the
disubstituted; the mono-, tri- and tetrasubstituted were, respectively,

Card 1/2

Examination of the nature of ...

S/081/62/000/018/032/059
B158/B180

20.09, 24.80 and 12.5%. No hydrocarbons with a side chain containing
> 4 C atoms were discovered in the HH complex. [Abstracter's note:
Complete translation.]

Card 2/2

PISHNAMAZZADE, B.F.; ISMAILZADE, I.G.; KOSHELEVA, L.M.; EYBATOVA, Sh.E.;
MAMEDOV, F.A.; CRUDZHEVA, T.M.; MAMEDOV, G.M.

Nature of hydroaromatic hydrocarbons of the fraction boiling
at 140-175°C from Kirmaki series in the Naftyanyye Kamni
offshore field. Azerb. khim. zhur. no.2:3-11 '63.
(MIRA 16:8)

PISHNAMAZZADE, B.F.; ISMAILZADE, I.G.; KOSHELEVA, L.M. ; EYBATOVA, Sh.E.;
MAMEDOV, F.A.; ORUDZHEVA, T.M.

Investigation of the nature of the hydroaromatic hydrocarbons of
the fraction of 140-175° from the petroleum of the Neftyanyye Kam-
ni field. Nefteper. i neftekhim. no.10:12-14 '63. (MIRA 17:2)

1. Institut neftekhimicheskikh protsessov, g. Baku.

EYBER, I.S.

Biologic reaction for pregnancy with male frogs *Rana ridibunda*. Akush.
gin., Moskva No.4:40-42 July-Aug 51. (CLML 21:1)

1. Of the Obstetric-Gynecological Clinic (Director--Prof. M.A. Dania-
khiy) of the Pediatric Faculty of Saratov Medical Institute.

EYBER, N.S.

Dynamics of disappearance of chorionic gonadotropins in urine in vesicular mole. Akush. gin. no.3:31-33 May-June 1953. (GLML 25:1)

1. Of the Department of Obstetrics and Gynecology of Khar'kov Scientific-Research Institute for the Care of Mother and Child imeni N. K. Krupskaya (Director -- A. I. Kornilova) and of the Department of Age-Group Endocrinology of the Ukrainian Institute of Experimental Endocrinology (Director -- Prof. Z. M. Dinershteyn).